

AMENDMENTS TO THE CLAIMS:

12. Canceled

13. Canceled

14. (Canceled)

15. (Currently Amended) A system for extracting samples from a stream flowing in a conduit, comprising:

a. a probe located in said conduit, said probe including a channel for passing a sample flow from the conduit for analysis;

b. regulating means for controlling the velocity of the sample flow through said probe channel to correspond to the velocity of the stream flowing in the conduit, said regulating means comprising means for generating a feedback signal representing the relative velocities of the stream flowing in the conduit and the sample flow through said probe channel; and

c. a filter for capturing particulate matter, said filter communicating with said probe channel, wherein said means for generating a feedback signal includes a conduit static pressure measuring means formed in an enclosed path located closely adjacent an external surface of said probe,

d. a pump, said regulating means feedback signal controlling the pump flow rate of said pump to isokinetically deliver sample from said probe channel to said filter, and

e. ~~which additionally comprises~~ a condenser communicating with the pump to generate liquid matter from said sample flowing from said probe channel and a dry gas meter

communicating with said pump for measuring the volume of gas in said sample flowing from said probe channel.

16. (Canceled)

17. (Canceled)

18. (Previously Presented) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe;

(D) a flow control device that is configured to adjust a fluid flow rate through said probe;

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe; and

F) at least one additional external pressure port configured to provide an indication of a static pressure in said portion of the fluid stream.

19. (Previously Presented) The sampling system as recited in claim 18, wherein said external pressure ports are arranged relative to one another so as to substantially cancel the effects of any misalignment between the direction of flow in the stream and the orientation of the pressure ports.

20. (Previously Presented) The sampling system of claim 16, further comprising a differential pressure sensor that is coupled to said external pressure port, said internal pressure port, and said controller, said differential pressure sensor generating a signal indicative of a pressure differential between the interior of said probe and the exterior of said probe and transmitting said signal to said controller.

21. (Previously Presented) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe;

(D) a flow control device that is configured to adjust a fluid flow rate through said probe;

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe; and

F) a dilution tunnel and an exhaust line having an inlet connected to said probe and an outlet opening into said dilution tunnel, ~~and~~ wherein said flow control device comprises a damper that controls an ambient fluid flow rate through said dilution tunnel.

22. (Previously Presented) An isokinetic sampling system comprising:

(A) a probe that is configured for insertion into a fluid stream, said probe having an interior and an external surface;

(B) an internal pressure port that opens into the interior of said probe and that is configured to provide an indication of a static pressure within said probe;

(C) an external pressure port that is located externally of the external surface of said probe and that is configured to provide an indication of a static pressure in a portion of the fluid stream that surrounds said probe; and

(D) a flow control device that is configured to adjust a fluid flow rate through said probe; and

(E) a controller that is operable to control said flow control device, in response to pressure measurements obtained from said external and internal pressure taps, to maintain at least substantially equal static pressures internally of and externally to said probe, wherein said flow control device comprises a variable speed pump that is coupled to said probe.

23-31. (Canceled)